

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

What is claimed is:

1. (currently amended) A ~~rotary cutting tool~~ helical end mill comprising a body having a circumferential face bearing a plurality of pockets for receiving cutting inserts and a rotational axis disposed within said circumferential face, wherein said ~~pockets~~ the cutting inserts are arranged in at least two rows and at least three columns on said ~~the~~ circumferential face, and wherein ~~said~~ the angular spacing of the cutting inserts ~~pockets~~ within at least one of the rows varies within the row.

~~display at least two of three types of orientational irregularities relative to said circumferential face, wherein said three types of orientational irregularities include~~

~~angular spacing of a first said pocket of a selected row and of a first said column which said angular spacing is unequal with respect to proximity to a second said pocket of said selected row and of a second said column, and to a third said pocket of said selected row and of a third said column;~~

~~differing axial rake angles of at least one said pocket from those of at least one other said pocket; and~~

~~differing radial rake angles of at least one said pocket from those of at least one other said pocket.~~

2. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 1, wherein said ~~pockets~~ are arranged in rows and columns on said circumferential face; and wherein at least one said ~~pocket~~ is arranged to hold an installed cutting insert is positioned at a first rake angle, and at least one other said ~~pocket~~ is arranged to hold another installed cutting insert is positioned at a different rake angle.

3. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 2, wherein ~~said the~~ first rake angle and ~~said the~~ different rake angle both comprise ~~both~~ axial rake angles.

4. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 2, wherein ~~said the~~ first rake angle and ~~said the~~ different rake angle both comprise radial rake angles.

5. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 4, wherein lead cutting inserts ~~pockets~~ of different columns display radial rake angles of greater magnitudes than the rake angles of at least some other ~~said pockets~~ cutting inserts.

6. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 4, wherein lead cutting inserts ~~pockets~~ of different columns and cutting inserts ~~pockets~~ immediately adjacent to ~~said the~~ lead cutting inserts ~~pockets~~ have similar radial rake angles; and lead cutting inserts ~~pockets~~ of different columns and cutting inserts ~~pockets~~ immediately adjacent to ~~said the~~ lead cutting inserts ~~pockets~~ each display radial rake angles of greater magnitudes than the rake angles of other cutting inserts ~~pockets~~.

7. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 1, wherein ~~said the~~ body has helical flutes disposed thereon, and each ~~said~~ cutting insert ~~pocket~~ is associated with one of ~~said the~~ flutes.

8. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 1, ~~wherein said rotary cutting tool is an end mill~~ wherein each ~~said~~ pocket is disposed to hold an installed insert such that the ~~installed~~ insert displays a clearance angle within the range of zero to twenty degrees.

9. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 1, wherein at least one ~~said pocket is arranged to hold an installed~~ cutting insert is positioned at a first axial rake angle, and at least one other ~~said pocket is arranged to hold another installed~~ cutting insert is positioned at a different axial rake angle; and

at least one ~~pocket is arranged to hold an installed~~ cutting insert is positioned at a first radial rake angle, and at least one other ~~said pocket is arranged to hold another installed~~ cutting insert is positioned at a different radial rake angle.

10. (currently amended) The helical end mill ~~rotary cutting tool~~ according to claim 1, wherein ~~said pockets collectively display all three of said three types of orientational irregularities~~ at least one cutting insert is positioned at a first radial rake angle, and at least one other cutting insert is positioned at a different radial rake angle, and at least one cutting insert is positioned at a first axial rake angle, and at least one other cutting insert is positioned at a different axial rake angle.

11. (new) A helical end mill comprising a body having a circumferential face bearing a plurality of pockets for receiving cutting inserts, wherein the cutting inserts are arranged in at least a first row and a second row and at least three columns on the circumferential face, wherein the angular spacing of the cutting inserts within the first row varies within the first row, and the angular spacing of the cutting inserts within the second row varies within the second row and varies from the angular spacing of the cutting inserts within the first row.

12. (new) The helical end mill according to claim 11, wherein at least one cutting insert is positioned at a first rake angle, and at least one other cutting insert is positioned at a different rake angle.

13. (new) The helical end mill according to claim 12, wherein the first rake angle and the different rake angle both comprise axial rake angles.

14. (new) The helical end mill according to claim 12, wherein the first rake angle and the different rake angle both comprise radial rake angles.

15. (new) The helical end mill according to claim 14, wherein lead cutting inserts of different columns display radial rake angles of greater magnitude than the rake angles of at least some other cutting inserts.

16. (new) The helical end mill according to claim 14, wherein lead cutting inserts of different columns and cutting inserts immediately adjacent to the lead

cutting inserts have similar radial rake angles; and lead cutting inserts of different columns and cutting inserts immediately adjacent to the lead cutting inserts each display radial rake angles of greater magnitude than the rake angles of other cutting inserts.

17. (new) The helical end mill according to claim 11, wherein the body has helical flutes disposed thereon, and each cutting insert is associated with one of the flutes.

18. (new) The helical end mill according to claim 11, wherein each pocket is disposed to hold an insert such that the insert displays a clearance angle within the range of zero to twenty degrees.

19. (new) The helical end mill according to claim 11, wherein at least one cutting insert is positioned at a first axial rake angle, and at least one other cutting insert is positioned at a different axial rake angle; and at least one cutting insert is positioned at a first radial rake angle, and at least one other cutting insert is positioned at a different radial rake angle.

20. (new) The helical end mill according to claim 11, wherein at least one cutting insert is positioned at a first radial rake angle, and at least one other cutting insert is positioned at a different radial rake angle, and at least one cutting insert is positioned at a first axial rake angle, and at least one other cutting insert is positioned at a different axial rake angle.